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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,532	09/29/2003	Jong-Yoon Hwang	678-508 CON	1828

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EXAMINER

D'AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,532

Applicant(s)

HWANG ET AL.

Examiner

Stephen M. D'Agosta

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 122 and 25 have been considered but are moot in view of the new ground(s) of rejection.

1. The double patenting rejection will be addressed by the applicant in the future. The applicant can either send in a fully executed/signed Terminal Disclaimer and/or amend the independent claims to recite material not found in the parent claims.

2. The examiner upholds his USC 112 rejection for certain terms as being vague and indefinite. The applicant refers the examiner to Tables 1-3 yet these tables explicitly require the PCB bits to be compared to TWO different thresholds (TH1 and TH2). This comparison is not found in the independent claims. To overcome the examiner's rejection, the applicant can either:

- a. Provide specific figures or ranges to define the terms
- b. Amend the claims to recite that the energy values are compared to TWO different thresholds in order to determine when the data is GOOD, BAD, SUFFICIENT, INSUFFICIENT, PASSES, FAILs, etc.

3. The examiner has added a new USC 112 rejection to the claims since it has a missing step(s) – eg. while a ratio is determined, it must be compared to some “value/threshold” in order for PCB's to be generated. The simple matter of generating a ratio does nothing by itself but requires another ACTIVE STEP in which the ratio is compared to something (the applicant should amend the claim(s) to state that the ratio is compared to a First and Second Threshold, as per Tables 1-3, in order to determine which PCB's bits to generate). In essence, the applicant's claim (#1) should read:

“..providing a first ratio of a power of the non-power control bits to a power en of the power control bits; and

comparing the ratio to first and second threshold values to determine the state of the signal,

generating a power control command bit based on the ratio...”

4. Another new USC 112 regards all the independent claims and has to again do with requiring these claims to recite comparing the bits to TWO different Thresholds (as per the applicant's tables).

5. The examiner upholds his previous rejection since the prior art reads on the claims (as pointed out by the column/line numbers indicated).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-22 and 25 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,725,054. Although the conflicting claims are not identical, they are not patentably distinct from each other because both deal with cellular mobile systems whereby ratios of bit energies are compared and influence power control decisions/operations.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. The terms "good/bad" and "sufficient/insufficient" and "pass/uncertain" in **claims 4, 7-10, 22-25** are relative terms that render the claims indefinite. These terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the **scope** of the invention. The applicant should either:

a. state a range which bounds these terms (eg. good should be replaced with a "range of values" or a "threshold value") or altogether remove them (via a re-write).

b. Amend the claims to recite that the energy values are compared to TWO different thresholds in order to determine when the data is GOOD, BAD, SUFFICIENT, INSUFFICIENT, PASSES, FAILs, etc.. (Note Tables 1-3 show use of TH1 and TH2)

2. **Claims 1, 4-5, 7-8, 11-12, 17, 22 and 25** rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

a. The omitted steps are: using two different thresholds (eg. Threshold 1 and 2, as per Tables 1-3) in order to determine GOOD, BAD, PASS, FAIL, SUFFICIENT, etc..

b. Also, when reciting "determining a ratio", another active step is required whereby this ratio is compared to something (eg. the two Thresholds).

Examiner's note: The applicant's specification provides details as to how one performs the power control operations. Tables 1-3, as put forth in the applicant's previous remarks, **requires** the applicant's independent claims to recite the use of TWO Thresholds, otherwise the terms GOOD/BAD, PASS/FAIL, etc. are indefinite because you are relying on the Tables to define these terms (which then requires you to use both thresholds). **Without this language, the claims will not be in condition for allowance.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Holtzman et al. US 6,788,685 and further in view of Wheatley, III et al. US 5,461,639.

As per **claim 5**, Holtzman teaches a method of controlling forward link transmission power in a mobile communication system capable of discontinuous transmission mode (figure 1 and C3, L1-8), where a power control command for controlling the forward link transmission power, the method comprising:

a first step of determining whether an power of power control bits of a received frame is more than a first threshold value, said first threshold value determined as a minimum value for receiving data;

a second step of determining that a channel state is good if the first step determines that the power of the power control bits is more than the first threshold value AND a third step of determining that the channel state is bad if the first step determines that the energy of the power control bits is less than the first threshold value:

Memory 222 provides the energy of the power control bits and the traffic channel energy for each power control group in the frame to power control bit filter 224. Power control bit filter computes a filtered power control bit energy value in accordance with equation (5) above. The filtered power control bit energy is provided to power control bit generator 226. The filtered power control bit energy is compared against a predetermined energy threshold in power control bit generator 226. If the filtered power control bit energy is less than the threshold then a power control command indicating that the base station should increase the transmission energy of the traffic channel is generated. If the filtered power control bit energy is greater than the threshold then a power control command indicating that the base station should decrease the transmission energy of the traffic channel is generated. (C15, L65 to C16, L13),

But is silent on a terminal generates the command.

The examiner notes that it is well known in the art for the BTS to perform control functions and/or be assisted by the mobile (eg. MAHO) whereby the mobile makes measurements and sends them to the BTS. Therefore Holtman's design would be modified by one skilled to use well known mobile measuring concepts to inform the BTS that it needs to increase/decrease power of the forward channel. Further to this point is **Wheatley**, who teaches the mobile sending commands back to the BTS for it to increase or decrease power:

The fast forward power control process of the present invention enables a mobile to instruct a base station to change its power output at a faster rate. This process enables the mobile to send a power change command every frame of data without degrading the voice or data quality. (C7, L20-27 and C3, L40-50).

It would have been obvious to one skilled in the art at the time of the invention to modify Holtzman, such that the mobile sends back commands for the BTS to increase or decrease power, to provide feedback means for the mobile to command the BTS so that it better receives data via optimal forward channel power control.

As per **claim 6**, Holtzman teaches claim 5, further comprising using CRC information/algorithms (C3, L60 to C4, L10. Also see figure 1) **but is silent on**

a fourth step of determining whether data decoded prior to the first step has been correctly decoded if the received frame includes cyclic redundancy check (CRC) information; and

a fifth step of determining that the frame is good if it is determined that the data has been correctly decoded at the fourth step, ~~or performing the first step if it is determined that the data has not been correctly decoded.~~

The examiner takes **Official Notice** that one skilled understands that a CRC failure means the frame was not received properly and should be discarded. Hence one skilled would not perform measuring of the energy bits (eg. the first step of claim 5)

since the data is corrupt and may give false readings. Therefore, one skilled would perform CRC prior to performing a first step AND determine the frame is good if the data has been correctly decoded. *The font that has been struck through has not been examined since the claim contains an "OR" so that portion is optional.*

It would have been obvious to one skilled in the art at the time of the invention to modify Holtzman, such that fourth/fifth steps are used for CRC checks and decoding, to provide means for only performing the first step on successfully CRC-checked frames.

As per **claim 7**, Holtzman teaches A forward power control method for performing forward link transmission power control using a power control command received from a terminal in a mobile communication system capable of discontinuous transmission mode (C3, L1-8), **but is silent on** the method comprising:

a first step of transmitting power control bits for power control decrease if a channel state signal is "sufficient" is received from the terminal; and

a second step of transmitting power control bits for powercontrol increase if a channel state signal is "insufficient" is received from the terminal.

Wheatley teaches the mobile sending commands back to the BTS for it to increase or decrease power:

The fast forward power control process of the present invention enables a mobile to instruct a base station to change its power output at a faster rate. This process enables the mobile to send a power change command every frame of data without degrading the voice or data quality. (C7, L20-27 and C3, L40-50).

It would have been obvious to one skilled in the art at the time of the invention to modify Holtzman, such that the mobile sends back commands for the BTS to increase or decrease power, to provide feedback means for the mobile to command the BTS so that it better receives data via optimal forward channel power control.

Allowable Subject Matter

Claims 1-4, 8-22 and 25 will be allowable if/when the USC 112 rejection is addressed.

Conclusion

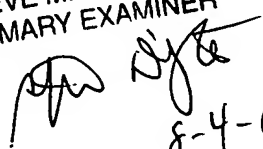
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Jalali et al. US 6,154,659
2. Holtzman et al. US 6,788,685

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

STEVE M. D'AGOSTA
PRIMARY EXAMINER

8-4-06